

For Citizens Who Enjoy Thinking: Why My Candidacy Is Unique

by Lyndon H. LaRouche, Jr.

This statement was issued by the LaRouche in 2004 Presidential campaign committee.

August 5, 2002

The once-popular expression was, "It's an ill wind that blows nobody good." The shock of the collapse of such popular delusions of the 1990s as the "the new economy" hoax, has caused a good deal of widespread awakening from what had become our students' and citizens' prevalent habit, the habit of preferring to react impulsively, as if by conditioned reflex, rather than actually think.

Today, the typical problem for those people, is that actually thinking about the economy today, is like being awakened from a silly dream, to discover that they are living in a real-life nightmare. For many, the end of the hours of dreamy denial of the reality of a financial debacle, comes as it does to the man hiding from reality by cowering in his foxhole, into which a grenade has just been dropped. Some have described their experience in words to the effect, "I know you told me to get out of the markets, but I needed the profits. Now, I have lost everything." I did warn them, early and often. Are they prepared to do what must be done now? More and more of them are now doing some serious thinking; and, that is good.

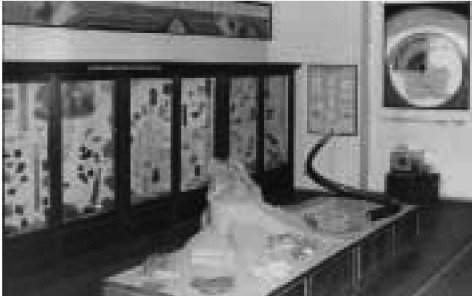
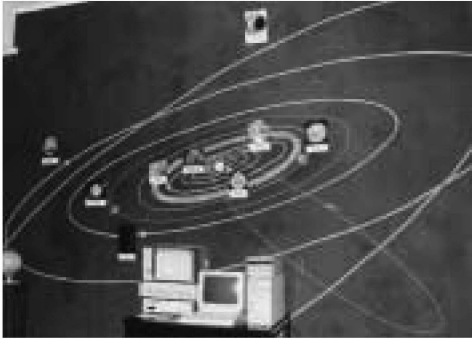
More and more people, both ordinary citizens and institutional figures, from around the world, are now looking to me for guidance on dealing with problems for which they can offer no clear solution. Fortunately, I know enough of the answer to such questions, to show how we can survive the present monetary-financial collapse. I do not have complete answers, but enough to get us through the emergency, and

give us time and freedom to attack the remainder of the immediate issues.

It is for good reasons, that such circles are now looking, increasingly, in my direction. The most important subject of today, is *solutions*. For example, one should wonder whether some value between \$800 and \$1,000, or higher, at this time, would be the right price for gold, within that fixed-rate, gold-reserve system, which must now, suddenly, replace the self-doomed floating-exchange-rate monetary system. However, defining solutions requires that we define the sickness to which the remedy is to be applied.

During more than thirty-five years to date, I had gone on the public record with what became widely circulated series of long-range economic forecasts. The outcome of those forecasts would have been a stunning success for any leading professional in any field of science. Events have proven, repeatedly and consistently, that my published forecasts have never been mistaken. Although I am widely known, and my work discussed, and often hotly debated, among leading circles in most parts of the world, no critic has competently refuted any of those forecasts, even when most have now been fulfilled.

The essential basis for my success has been, that I never forecast any development which was not already in progress. As I shall explain in these pages, my success illustrates the most elementary principle of scientific method, that a set of wrong policies of a nation, form a system, which, once put into practice, may define a trajectory of one or several decades' duration, or longer, leading toward the inevitable, systemic catastrophe which waits, fatefully, like death, at the end of that track. Unless that nation gets off that track, unless those



Not your usual sort of Presidential candidate: Lyndon LaRouche (center) tours the Vernadsky State Geological Museum in Moscow, in 2001, with his wife, Helga. Dr. G.V. Naumov briefs his guests on the work of the great Ukrainian-Russian scientist V.I. Vernadsky (1863-1945), whose concepts of the Biosphere and Noösphere are resonant with LaRouche's own thinking. On the left, museum exhibits on the Solar System, geology, and magnetism.

errant, but popular policies are scrapped, the catastrophe will be as inevitable as the reappearance of Halley's Comet. The included function of long-range forecasting, is to warn society to abandon its popular, but blundering opinions, in time to avoid the already lurking systemic disaster ahead.

Now, a terrible, global monetary-financial disaster has struck. It will soon be clear to nearly all persons around the world, that the kind of monetary-financial system associated with the present IMF and World Bank, is dead, and soon buried, one way or another. No one could save that system now; only a man driven to lunacy out of desperation would try. The world has reached the end of that track. All the world could do now, is to adopt a new system of the type I have defined. If that latter choice is not made very soon, the planet will be plunged into a new dark age of incalculably vast dimensions and duration.

Therefore, everything I had forecast could have been verified by any competent economist. However, with very few exceptions, virtually all known leading economists, and governments, have been terribly, repeatedly wrong on these issues, during the sweep of the past thirty-five-odd years. They have clung faithfully and tenaciously to the anchor of the doomed ship, sometimes in prayerful admiration of foolish Captain Alan Greenspan and his crew. For chiefly that reason, all of the leading U.S. political parties, and their Presidents have been intellectually bankrupt in their economic and social policies, intellectually and programmatically, throughout the past thirty-five years. Before August 15, 1971, and afterwards, the overwhelming majority of the academically cen-

tered university and think-tank specialists, and their textbooks, have been systemically incompetent in what they claimed as their profession. This is most emphatically the case for most of the professionals who entered universities during, or after the mid-1960s.

It is true that those Presidents were voted in, more or less democratically, and perhaps increasingly less, rather than more. That was foolish behavior, especially since at least one available Presidential candidate was qualified for dealing with the ongoing world crisis; but, like the ancient Roman Empire, bad systems rely on support, or, at least, tolerance from popular opinion for their existence.

This failure of economists, bankers, political parties, and governments, was possible only because of a widespread, popular habit, of not thinking seriously about systemically significant policies and practices. People generally preferred "bite-sized" answers of the type the TV talk-shop hosts demand, answers which exclude the possibility of actually thinking; a typical such answer is the silly, "Yes, I believe in free trade." Even after the surge of present global "crash" of the 1990s took over, beginning in 1997, professionals generally have clung hysterically to assumptions and formulas which, in fact, had no scientific basis.

Now, that could change, rapidly. That must be considered good.

The Problem Was the System

Now, as I forecast the fate of the incoming George W. Bush Presidency, shortly before that President's inaugura-

LaRouche's Campaigns for the U.S. Presidency

In every election since 1976, "at least one available Presidential candidate was qualified for dealing with the ongoing world crisis; but, like the ancient Roman Empire, bad systems rely on support, or, at least, tolerance from popular opinion for their existence."

—Lyndon H. LaRouche, Jr.



1976

Jimmy Carter, campaigning in New York City, meets up with supporters of LaRouche's Presidential bid.



1980

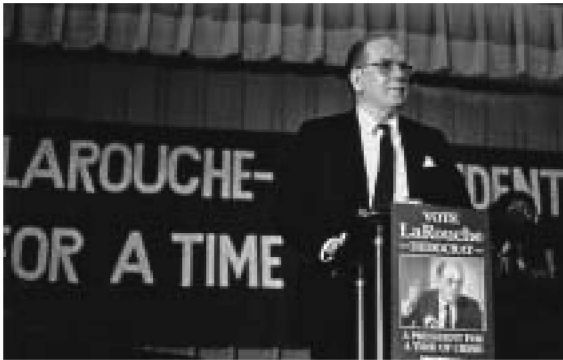
LaRouche and Ronald Reagan at a Presidential candidates' debate in New Hampshire.

1984

LaRouche's campaign for the Democratic Presidential nomination stressed the need for a national emergency defense-industrial mobilization, in the context of the Strategic Defense Initiative.



LaRouche Democrats protest vote fraud in Baltimore against their candidate.



1988

LaRouche organizers campaign in the New Hampshire primary. One year later, LaRouche became a political prisoner of the George H.W. Bush Administration, the result of a years-long effort by a "Get LaRouche" task force that spent millions of dollars in an effort to shut him up.



A pamphlet circulated by "Democrats for Economic Recovery: LaRouche in '92."



1992

Bill Clinton, campaigning in the New Hampshire primary, is greeted by LaRouche supporters, who hand him a pamphlet calling for LaRouche's exoneration. LaRouche spent five years in prison, but campaigned for the Presidency and the Congress from there.

1996

LaRouche gives a press conference in Norfolk, Virginia, March 29, 1996.



2000

LaRouche supporters in Albany, New York, file 50,000 signatures gathered in the dead of Winter, to get their candidate on the ballot for the Democratic primary. The Al Gore crowd in the Democratic Party, in violation of the 1965 Voting Rights Act, excluded LaRouche wherever possible, and stole his legally-elected delegates to the national nominating convention.



tion, the present world monetary-financial system has passed over from crises, to disintegration. The phase has been reached, at which nothing could save that system in its present form, the form associated with the intellectually bankrupt International Monetary Fund and World Bank. It is now the end-times for the existing monetary-financial system, a time when survival demands a profound change in thinking of ordinary citizens, as much as by leading political figures.

To define the presently disintegrating monetary-financial system as a system, we must focus upon fundamental changes in the character of the U.S.A.'s and relevant other economies, from the system developed by U.S. President Franklin Roosevelt's leadership, 1933-1945, to the modified post-war version of Roosevelt's design, 1945-1964, and the contrast of both with the present, failed system, which took over during the interval of the U.S. 1964-1972 Indo-China War.

The 1945-1964 post-war system, featured included injustices and other faults, but it was, overall, a net success as measured in terms of physical results for the economies and their people as a whole. The presently doomed world monetary-financial system, that of the present IMF and World Bank, has been a global catastrophe. The Roosevelt recovery and the 1945-1964 Bretton Woods System, are characterized by great build-up of basic economic infrastructure, including health-care systems, and per-capita increase of the net physical productive powers of labor in agriculture and industry. The characteristic of the evolution of the present system, since the 1960s, has been a shift from a productive society, to what has been called, alternately, a "post-industrial" or "consumer" society. That shift must now be reversed. Admittedly, that needed reversal will not be simply a carbon copy of the 1945-1964 Bretton Woods System, but it will be a system with similar characteristics.

So, the sick world monetary-financial system which was formally installed by President Richard Nixon, on August 15, 1971, crafted under National Security Advisers Kissinger and Brzezinski, and which has been ruled since October 1979 by Federal Reserve Chairmen Paul Volcker and Alan Greenspan, is the chief cause for the presently accelerating collapse of the physical economy, throughout the Americas and Europe, as well as Africa. The U.S. economy, like that of Europe, has now entered a bottomless collapse which, unless stopped, will be far worse than 1929-1933. Unless we put the present monetary-financial system through drastic bankruptcy-reorganization, suddenly either wiping hundreds of trillions of dollars equivalent of purely fictitious values from the books, or freezing them for the time being, there is no future for any part of the Americas, Europe, and Japan at this juncture.

Although most U.S. citizens have not yet faced the full reality of our present situation, eyes and minds are opening to a degree we have not seen in the U.S.A. during approximately two decades. The Rip Van Winkles of our popular opinion have been sleeping for no less than a generation. It is

the relentless thunder of the presently rising economic storm, which has, finally, disturbed their ideological slumbers. In the final analysis, "It's an ill wind, that blows nobody good." Leibniz insisted, therefore, that ours is the best of all possible worlds; it is a world in which the good will ultimately prevail. Therefore, why wait; why not seize the existing opportunity now?

In such a manner, you and I have entered into one of those tumultuous times, when, as Heraclitus wrote, "Nothing is permanent but change." It is time to understand the changes, for worse, for better, and for worse, which have come over the U.S.A. since 1929-33. More and more among you must now accept the reality of the idea of change.

Stop merely reacting to what you see, hear, and feel from moment to moment. As the discoverer of universal gravitation, Johannes Kepler, demonstrated, you could not determine the future position of a planet from its past and present positions; you must, first, discover the long-range orbit which controls the planet's motion. You must see economic processes as systems, in the sense that we describe Kepler's discovery as defining a system. You might imagine yourself in Heaven, looking down upon the past 2,500 years of European civilization's history. See yourself, as if from Heaven. Ask, what does the experience of history teach us, about the orbital-like trajectory which is moving the U.S.A. to its destiny in the near future?

I invite you to think. Forget the popular opinion which misled you into the trap. Think! I give you the following essential clues to the reasons for my unique success as an economist, and, therefore, my unique qualifications as a candidate for the U.S. Presidency under conditions of the kind of *systemic*, global economic crisis I describe here.

1. History As Systemic Real-Life Drama

A comparative study of Classical tragedy, against the backdrop of actual history, shows us that all true real-life tragedy has been brought upon a people by a prevalent, *systemic* tradition which controlled both relevant leading popular opinion and the leadership of authoritative institutions.

When the society steers the trajectory of society's flight into directions contrary to the laws of nature, as the U.S. has drifted over the recent thirty-five years, that society is impelling itself toward its self-destruction. The Classical stage, as developed from benchmark cases, from Sophocles, Aeschylus, and Plato's dialogues, through Shakespeare, Lessing, and Friedrich Schiller, has earned the distinction of exposing, prophetically, the self-doom of once powerful nations and cultures, such as Hapsburg Spain, by the long-range impact of pathetic ruling beliefs, beliefs no sane person would wish to repeat today. The great works of the Classical stage,

well performed, are the most efficient instrument yet developed for producing audiences which, as Schiller emphasized, leave the theater wiser and better people than those who had entered it.

It is, thus, by the will of their adopted false gods, that a people is self-destroyed, such as the Greek culture of the *Iliad*, as the culture of the House of Atreus was. So, those who seek to play the role of such false gods, are also ultimately doomed themselves, as Aeschylus warns in his *Prometheus Bound*.

That is precisely what has happened to the U.S.A. and its people during the recent thirty-five-odd years since the beginning of the U.S. war in Indo-China.

As a result of changes which coincided, approximately, with the outbreak and continuation of that needless war, the U.S.A. is currently at the brink of its self-destruction, that in a way no different than what is described in the great Classical tragedies.

Tragedy is not a matter of inevitable outcomes. The human will is free to choose alternate trajectories for its course of action. Our ability to forecast the likely future of a nation, is limited to our knowledge of the trajectory which has been implicitly chosen. True prophets do not predict history; they, as *The Bible* describes Jonah, warn against the ruin which must occur if presently ruling opinion prevails. Do not blame the prophet for the catastrophe; blame the people who do not heed the evidence of their own folly.

In this universe, there are no absolutely predetermined events. God's Will, if not ours, could always intervene to change destiny. Yes, the universe is pervasively lawful, but man's free will is able to discover new laws, such as universal physical laws, and to apply them, to change man's destiny. Man is also able to discover the errors in his beliefs, and to free himself from the doom those errors will cause. There exists always the possibility of a culture's escape from such self-imposed doom, the possibility that a culture might be induced to change itself in ways which would enable it to survive. But, it is not free to make arbitrary choices; it must accept the reality of those conditions.

Admittedly, every known culture of pre-modern times has been entirely, or partially self-destroyed. More recently, Europe, during the course of the Twentieth Century, reduced itself to a much lowered status in the world at large, by plunging foolishly into two general wars. These wars were brought upon Europe by nothing but European peoples' folly, their failure to abandon what were fairly described metaphorically

as its assortment of cultural childhood diseases: the Romantic legacies of its imperial, monarchical, and Napoleonic traditions, for example. There were no need for Germany, Austro-Hungary, Russia, France, and the United Kingdom to have plunged into those so-called "geopolitical" wars. In the first case, it was two silly Kaisers, a silly Czar, and a mad Clemenceau, who drowned their own nations in the mutual ruin, by allowing themselves to be duped by the greatest fool of them all, England's Imperial Edward VII.

So, just as those who murdered Wallenstein, out of loyalty to a foolish monarch, doomed Europe to the continuation of the Thirty Years War. So, Europe plunged itself into the two so-called World Wars of the past century.¹

The European heads of state who led their nations into World War I, bore immediate, personal responsibility for the war, but, as Shakespeare emphasizes in the final scene of the tragedy, it was not Hamlet who doomed ancient Denmark; it was the culture of the people of Denmark at that time: *It was the system*. It was the customs of Venice's puppets, such as the Hapsburg and Hapsburg house, which bear the principal guilt for that holocaust. So, it was the customs of the Greece of the House of Atreus which doomed itself. They cling to their failed traditions, as did the self-doomed passengers who refused to abandon a sinking ship.

The cause for the relative powerlessness of a wrecked Europe today, relative to the power of a U.S.A., now itself in the process of panic-stricken self-destruction, lies, still, in those continuing cultural traits of Europe, which express the continued influence of the folly which led into those two general wars of the last century. Nations which reject their true prophets bring ruin upon themselves. A culture which rejects a true prophet dooms itself as morally unfit to survive. So, a doomed culture must say to itself: "The fault lay not in our stars, but in ourselves." That people, both those wielding great power, and others, were of little minds, little minds so filled with a Romantic's traditions, that no space remained for serious thinking.

In this way, earlier, each of the ancient empires of Mesopotamia, brought their own destruction upon themselves, as empires which lacked the essential cultural qualities of fitness to survive. Athens destroyed itself with the folly of launching the Peloponnesian War. Rome's moral unfitness to survive, led to its own self-imposed doom, as the same Romantic tradition doomed the Byzantine Empire, as it doomed both the fraudulent ultra-montane system of theological imperialism in feudal Europe, and the imperial maritime power of Venice.

Yet, although all known cultures have undergone either temporary or permanent self-destruction in such ways, the

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1. Wallenstein was as Schiller portrays the situation, a truly tragic figure, who only dallied with possible escape from the war, but it was those who murdered him and condoned that action who bear responsibility for the continuation of that religious warfare.

paradoxical evidence is, that mankind has progressed. Whereas, no variety of higher ape could have ever achieved a level of current population above the order of millions of living individuals, mankind today numbers in the billions, most of the rate of increase was made possible by the radiating impact of Europe's Fifteenth-Century Renaissance. It was that Renaissance which revived the best of the Classical Greek heritage, to craft the principles used to establish the first sovereign nation-state republics, in Louis XI's France and Henry VII's England, and to launch modern experimental physical science.

Like all true, ontological paradoxes, the existence of that paradox begs the recognition of an efficient universal principle.

Whereas all poor beasts are traditionalists, man's goodness lies in those qualities which define ours as an intrinsically revolutionary species. "Free will" is not arbitrary freedom, not mere opinion; true free will is what is typified by Kepler's uniquely original discovery of universal gravitation: the discovery for use of what is demonstrated, experimentally, to be a universal physical principle. In the practice of the Classical artistic tradition, as distinct from the axiomatically irrational practice of Romanticism and modernism, this same revolutionary quality, which sets the human individual and society absolutely above the apes, is often identified in the English expression of Classical culture as the principle of "the Sublime."

Economics as the Sublime Science

Now, think again. Have some real fun!

Economics did not exist as a scientifically rational form of knowledge, prior to the Italy-centered, Fifteenth-Century, anti-Romantic, Classical Renaissance. Economics, so defined, has two aspects. It is the interactive combination of those two aspects, which defines the only competent approach to defining the systemically characteristic features of all globally extended, modern European civilization.

The first aspect, is the essential distinction between a normal human individual and any beast. The power of "free will," is the power to generate an hypothesis, in Plato's sense of that term. This is an hypothesis which can be proven experimentally to be a universal physical principle, as Kepler, Leibniz, Gauss, Riemann, Vernadsky, et al., have defined the standard for a universal physical principle.

The second aspect, is the transmission of such discoveries of universal principle, by replication of an original act of discovery within the mental processes of another individual. It is that latter, *social* feature specific to human relations, the uniquely human power to transmit ideas of valid universal principle, which defines human society as distinct from a bestial heap of biological individuals.

That combination of the two distinctions I have just summarized, is, as I shall show here, the precondition for any competent understanding of economics.

When a society discovers and adopts an experimentally valid universal physical principle, the human species' power in and over the universe is increased, not merely in degree, but qualitatively. Whereas, among animals, the *potential relative population-density of the species* is limited genetically, the human species' power to discover the employment of universal physical principles causes an increase in mankind's potential relative population-density, a physical effect which could occur among lower forms of life only through upward-directed biological evolution.

Many cultures, such as the best periods of ancient Egypt and Classical Greek culture, most notably, made great steps

of scientific progress, both in physical science and in what were recognized by the Fifteenth-Century Renaissance of Filippo Brunelleschi, Leonardo da Vinci, and Raphael Sanzio, as Classical forms of artistic composition. However, prior to that Renaissance's introduction of the notion of a sovereign republic based on the principle of the general welfare, the social side of scientific practice was a crippled, morally defective one.

The characteristic feature of the revolutionary change in European culture, sought by Dante Alighieri, and defined by Nicholas of Cusa and Jeanne d'Arc, was that no government possessed the moral authority to rule, except as it was efficiently committed to the promotion of the general welfare of not only all of the living, but of posterity. Such are the three fundamental, universal principles (sovereignty, general wel-

fare, and posterity) upon which the legitimate expression of the U.S. Federal Constitution is unconditionally premised.

Before that Renaissance, human beings were divided politically among rulers and their henchmen, on the one side, and classes of persons treated as human cattle, on the other. The cattle were subdivided between herded and wild cattle. Even in today's U.S.A., there are morally degenerate citizens who, as utilitarians in the Jeremy Bentham tradition, still insist that children and youth should not be educated "above their predestined social station in life." Those utilitarian degenerates are thus included among those who regard people as "human cattle," as virtually a form of property. On account of such opinions about education, even some of today's U.S. parents regard their own children as property in fact of practice, as they do the progeny of the neighbors.

The intrinsically Sublime nature of humanity, is rightly conceived, as composed of sovereign individual personalities, endowed with the intellectual potential of generating valid hypotheses which serve as universal principles. This requires that social relations be premised on the expression of that Sublime quality.

We must educate all young in the direction of encompassing within themselves the finest fruits of human scientific and Classical-artistic progress to date. We must educate them as human beings, not as trained beasts of the field and barn. It is that transmission of an upward evolving culture, from one generation to the next, which defines sane human relations, a sane society. It is the fostering of the creative potential of all persons, the potential to replicate original acts of discovery of hypotheses which prove to be universal principles, on which any guarantee of a durably, systemically successful economy depends.

The characteristic feature of all known cases of failed cultures, is that they are either simply predatory cultures, whose members share the benefits of looting the people of other cultures, or they are composed of those who rule by whim over those who serve them in the capacity of herded human cattle. The latter was the system of Physiocrats such as Quesnay. The British monarchy combined both odious features—brutishness at home, and “invisible earnings” from abroad—under the utilitarian doctrines espoused by Jeremy Bentham. The doctrine of John Locke, which defined people as “property,” the more radical version of Locke, Justice Antonin Scalia’s dictionary-nominalist dogma of “shareholder value,” and the predatory doctrines of Harvard Professor William Yandell Elliott echoed in National Security Adviser Henry A. Kissinger’s NSSM-200, are examples of philosophies of practice which define failed cultures of an essentially predatory type.

The needed, systemic conception of humanity as a whole did not exist in the practice of any presently known culture, prior to Nicholas of Cusa’s revolutionary works, as typified by his *Concordantia Catholica*, setting the stage of a community of principle among sovereign nation-state republics, and his *De Docta Ignorantia*, the book which launched all valid currents of modern physical science. This conception of humanity is most quickly recognized by proceeding from the standpoint of my original contributions to the *science of physical economy*.

Economic science is, as Leibniz was the first to define a science of political economy, in his related writings of the 1671-1716 interval. My own original, 1948-1953 discoveries in the science of physical economy, were rooted centrally in my 1936-1940, adolescent adoption of the essentially Platonic standpoint of Gottfried Leibniz, in opposition to such representatives of the British, French, and German “Enlightenment” and its empiricist predecessors, as Francis Bacon, Thomas Hobbes, John Locke, René Descartes, David Hume, and Immanuel Kant. The significance of that youthful education, and its later role in my discoveries as a physical econo-

mist, is, I think, made most readily clear, pedagogically, by a comparison of the origin and development of my own original discoveries with Vladimir Vernadsky’s definition of the *Noösphere*.²

The Noösphere

Since the discovery of the Noösphere, by Russia’s biogeochemist Vladimir Vernadsky, no competent modern scientist actually believes in the utopian superstition currently popularized under the name of “ecology.”³ As I shall show, in summary, I came to conclusions during 1948-1953, which largely parallel much of Vernadsky’s definition of the Noösphere, but from a different starting-point, and with some significantly different results. My discoveries in the branch of science known as physical economy, are based on the conclusions reached during that 1948-1953 interval. My unique success as a long-range forecaster depends essentially on the elaboration of those discoveries. My distinctive qualifications for defining solutions to the present crisis, are the fruit of decades of application and refinement of those discoveries.

From my standpoint, there are, as I shall explain, two crucial, categorical omissions in Vernadsky’s work. However, looking at Vernadsky’s unique accomplishments from the vantage-point of my own discoveries, is probably the most efficient approach to teaching a quality of economics relevant for dealing with the global crisis wracking the world at this time.

I explain this and its relevance to U.S. economic policy-making today.

For pedagogical reasons which I need not detail here, I propose that the student, presumably at the level of a bright college undergraduate or graduate student, keep the following points of historical reference in sight.

The fundamental difference of principle, between the economic science of Leibniz and the then contemporary camera-lists, has its concentrated expression in his employment the German term *Kraft*. This signifies *power* in the same sense that Plato defined power as the quality which places a surface on a higher order of *physical* existence than a line, and a solid as a higher order of *physical* existence than a surface.

The same physical principle which Leibniz associates with that use of *Kraft*, is the central feature of Gauss’s 1799 paper announcing his fundamental theorem of algebra. Gauss defines the physical-geometric meaning of the complex domain, by exposing the blunders of D’Alembert, Euler, and

2. Lyndon H. LaRouche, Jr., *The Economics of the Noösphere* (Washington, D.C.: EIR News Service, 2001).

3. For reasons related to the pathological practice sometimes called “company manners” or “politeness,” what people say that they believe, often differs from what they actually believe. For example, even some brilliant physicists, whose achievements were effected in defiance of generally accepted peer-review standards, will cringe piteously before the pagan gods of generally accepted classroom mathematics. Excepting pathetic FBI cases such as the celebrated “Unabomber,” the widespread lip-service to “ecology” has more to do with Federal and foundation grants than any actually scientific evidence.

Lagrange. The notion of powers, in Gauss's definition of the complex domain, has the same ontological significance as the notion of powers in Plato's work, and Leibniz's notion of *Kraft* as an economic principle.

The same concept of *Kraft* is central to Riemann's celebrated 1854 habilitation dissertation, which builds chiefly upon the preceding work of Gauss. Riemann defines a purely physical, *anti-Euclidean* geometry,⁴ one without the pathological features inherent in any *a priori* geometry, such as Euclid's.⁵ In Riemann, the idea of an *a priori* dimensional space-time, is replaced by a geometry whose "dimensions" are experimentally proven universal physical principles.

In Plato, Leibniz, Gauss, and Riemann, for example, to go from a line to a surface requires a form of *physical action*, a potential for action which is non-existent within the line, an action, ontologically *outside that line*, which generates a higher order of power, the surface.⁶ So, a specific *physical action* is required for generating a solid from a surface. Thus, these *transformations*, these *physical actions*, are reflected as shadows cast upon naive geometries.⁷

Take any experimentally valid universal physical principle, such as Kepler's unique discovery of gravitation. Can

4. The first modern scientist to make this distinction between a non-Euclidean and an anti-Euclidean geometry was Abraham G. Kästner, a leading Eighteenth-Century scientific figure, the crucial teacher of Lessing and, later, of Carl Gauss, and an insightful, feared, and hated opponent of the destructive rampage of the Romantic ivory-tower science of that century. Non-Euclidean geometries, such as those of Lobatchevsky and young Bolyai, make significant insertions of an axiomatic quality into Euclidean geometry. Anti-Euclidean geometries, as proposed by Kästner, scrap the system of definitions, axioms, and postulates of customary classroom Euclidean geometry, as Riemann did, and as I follow Riemann in this. Gauss's anti-Euclidean standpoint, reflected in such locations as the 1799 documentation of the fundamental theorem of algebra, was, as Gauss explained later, suppressed in most of his later work, because of an aversive political environment maintained by the Romantic circles of Lagrange, Laplace, Cauchy, G.W.F. Hegel, and others. Gauss's continued anti-Euclidean standpoint is most clearly reflected in Riemann's 1854 habilitation dissertation, which was premised essentially on the foundations defined by Gauss.

5. Excepting the Xth through XIIIth books of *The Elements*.

6. Similarly ontologically absurd is the wildly reductionist, "a line is the shortest distance between two points." A line is properly defined as the pathway of the quickest distance within physical space-time. as Fermat, Christian Huyghens, Leibniz, and Jean Bernouilli successively defined this notion. E.g., the principle of the catenary. The catenary, or "hanging chain" principle, which exists, functionally, only within the complex domain as defined by Gauss's 1799 attack on the axiomatic blunders of D'Alembert, Euler, and Lagrange, is, for today's classroom in elementary secondary and university undergraduate mathematics, the proof that no real-world geometry but physical geometry exists, that in the sense the relevant work of Kepler-Fermat-Leibniz-Bernouilli-Gauss-Riemann on the subject of the principle of universal least action attests.

7. This signifies, as a first step in removing rubbish from teaching of Euclidean geometry, that space is not definable in three linear senses of direction connectable by simple rotation. Rather it reflects, as Classical scientists from Archytas and Plato through Eratosthenes, already knew, both the difference in power between line and surface, and between surface and solid. Gauss's 1799 proof of the efficiently real existence of the complex domain, is therefore a pivotal feature, the virtual ABC, of all competent modern science.

you see, hear, smell, or touch gravitation? Yet it exists quite efficiently. What we see, hear, smell, and touch, is not gravitation, but, rather, the effects of gravitation on the world of our sense-perceptions. Thus, we must distinguish between what our senses portray, sense-perceptions which are merely shadows of the real universe, and the efficient universal principles whose control over the real universe is reflected to the skilled experimenter's demonstration of the efficient existence of principles not directly represented by sense-perception.

Such is the central lesson to be learned from Gauss's 1799 proof that what ivory-tower mathematicians such as Euler and Lagrange only imagined to be "imaginary" numbers, reflected the existence of efficient physical principles, existing outside sense-perception, but efficiently controlling the action reflected as the shadow-like effects registered as sense-perceptions. The complex domain of Gauss, Riemann, et al., is the physical domain.⁸

That principle of reality is crucial for understanding Vernadsky's achievements.

The Riemannian view, so situated historically, is intrinsically indispensable for any competent form of economics teaching and practice today. Since man's power in and over nature, per capita and per square kilometer, depends upon the discovery and application of experimentally verifiable universal physical principles, the study of economic processes requires, that we view physical-economic space as defined by an expanding number of dimensions, each of which are experimentally validated universal physical principles. It is the process of discovery and application of those principles, which is the source of society's increase of its powers over the universe, the primary source of all increases in the productive powers of labor.

Vernadsky, using the same principle of experimental proof employed by Kepler, defined the universe as composed of what are, from the standpoint of Riemann, three multiply-connected, but nonetheless functionally distinct universal phase spaces: the abiotic; the living and its fossils; and, the physically efficient creative powers of the individual mind. My own work acknowledges Vernadsky's accomplishments, as far as he goes, but my discoveries in physical economy depend upon two added considerations lacking in Vernadsky's known work:

Although Vernadsky states his intention to study Riemann's work, there is no evidence in relevant available texts that that study was conducted to any significant effect. Riemann's conception of a multiply-connected, *anti-Euclidean* geometry, is indispensable for carrying Vernadsky's clearly intended objectives to a successful outcome.

8. Euler's and Lagrange's blunder, in relegating the complex (physical) domain to the realm of mere fantasy ("imaginary numbers"), was also expressed by Euler's enraged attack, in his *Letters to a German Princess*, on Leibniz's definition of the infinitesimal calculus. Leibniz's mathematical definition of the infinitesimal calculus is found in his collaboration of Jean Bernouilli, defining the catenary-tractrix relationship as reflecting the principle of a pathway of universal least action.

Vernadsky's definition of the distinction between the Biosphere and Noösphere, which he identifies as the noëtic principle of the individual human mind, is valid, but Vernadsky's writings miss the crucial social aspect of the noëtic (creative, cognitive) processes. He is right as to the function of the individual creative intellect, but misses the crucial role of the social process of *specifically cognitive* transmission of the experience of replicating original discoveries of universal principle. My own 1948-1953 discoveries in physical economy were premised on precisely those two considerations absent in the known work of Vernadsky.

Although I came to conclusions paralleling Vernadsky's distinction among the abiotic, the Biosphere, and the Noösphere, my own point of departure was chiefly the Platonic (Socratic) principle of cognition, as this permeates the method and conceptions of Leibniz. Otherwise, I was influenced, as Vernadsky and many others were, by the principled distinction between abiotic and living processes spread widely by the influence of Louis Pasteur and his circles.

My point of departure was my commitment, since adolescence, to defining Leibniz's notion of cognition against Kant's *Critiques*. Professor Norbert Wiener's "information theory" hoax, is what set me, from 1948 onward, on the track of showing the relationship between "voluntaristic" discovery of universal physical principles and systemic increases of the physical-productive powers of labor.

I went further. My fascination with the gap of nearly two millennia between the Classical scientific culture of Greece and the revival of that knowledge by the modern European culture, impelled me to compare the function of Classical forms of irony in poetry and drama, with the reenactment of original discoveries of physical principle after an interval as long as that between the death of Archimedes and the renaissance of scientific method and knowledge by such figures as Leonardo da Vinci and Johannes Kepler. I focussed upon certain figures whom early Twentieth-Century opinion falsely identified as "Romantics," including Keats, Shelley, Goethe, and Heine, and worked through my own critical assessment of William Empson's *Seven Types of Ambiguity*⁹ as a point of reference for my work of the 1948-1953 interval.

This led me to conclusions which I later adopted, during the late 1950s through early 1970s, and my own version of Vernadsky's concept of the Noösphere. Although all the essential features of my own discoveries were established before my attention turned to Vernadsky's work, my own views were greatly enriched by the latter encounter. For that reason, among others, I heartily recommend study of Vernadsky as a mandatory feature of any competent secondary and university undergraduate education in economy today. That said, I need spend no more time on the certain differences between our conceptions, and may freely treat the combination as a unified pedagogical experience for the thinking student.

9. William Empson, *Seven Types of Ambiguity* (Middlesex: Penguin Books, 1961).

My View of the Noösphere

The pivotal issue of all scientific work, is the elementary difference between what is merely learned *sense-perception*, in which the lower forms of life often surpass us in performance, and *knowledge*, which is uniquely the province of both the Creator and the human beings whose essential self is made in His species-likeness. The best known pedagogical paradigm for conceptualizing this distinction, is the allegory of Plato's Cave.¹⁰

Plato, as echoed by the Apostle Paul, in *I Corinthians* 13, warns that what our sense-perceptions present to us, are, at their best, merely shadows of the reality by which those shadows are prompted. Plato compares these to shadows on the irregular surface of the walls of a dimly firelit cave. In their best performance, perception presents us with those sense-organs' reaction to a real, but unseen stimulus. As we learn to distinguish, and correlate similarities and differences among sundry such experiences, we learn to perceive as if by radar.

Knowledge of the objects which prompt the shadows of sense-perception, is a different matter. Knowledge begins as a reaction to some evidence that sense-perception, taken for itself, is an unreliable guide to reacting to the universe. This evidence has the characteristic which the relevant formalism terms an *ontological paradox*. In Classical artistic composition, an ontological paradox is typified by a valid *metaphor*, a metaphor which expresses a stubbornly actual self-contradiction in the ostensibly literal evidence afforded by *simplistic sense-perception*. In all cases, physical science or Classical artistic composition, for example, the method for overcoming these ambiguities of meaning, these ontological paradoxes, is the Socratic method, the method of Plato's Socratic dialogues taken as a single, multiphased *spiritual exercise*, as a method of training the mind in the science of knowledge.

The first step, at that point, is to define what we must understand as the meaning of the term *universal physical principle*.

Take three examples from physical science. First, the discovery of the *principle of universal gravitation*, exclusively by Kepler. Second, *the discovery of the calculus*, accomplished uniquely by Leibniz, but brought to initial completion, as expressing a universal principle of least action, in collaboration with Jean Bernouilli. Third, Gauss's discovery of *the complex domain*. All three involve the discovery and proof of efficient existence of a universal physical principle, one which is proven to control the behavior of sense-experience, but one not found as an object of perception within the bounds of sense-perception.

Vernadsky's work within the field he defined as geobiochemistry, applied Kepler's methods for defining a universal physical principle of mathematical physics.¹¹ These methods

10. *Plato: The Republic*, Loeb Classical Library, Vols. I and II (Cambridge, Mass.: Harvard University Press, 1963).

11. Kepler himself explicitly attributes this method to Nicholas of Cusa, Luca Pacioli, and Leonardo da Vinci, as his predecessors in scientific method.

as developed by Kepler's followers, Fermat, Huyghens, Leibniz, Gauss, et al., were employed to prove experimentally that there exist three respectively distinct classes of efficient physical action in the known universe. All competent practice of economics for today's world depends upon comprehension of that fact and its specific significance for general application.

In scientific method, there must be a true ontological paradox in the relevant persistent experience of learned sense-perception. The evidence that the Mars orbit is virtually elliptical, not circular, was Kepler's initial definition of precisely such a paradox of regular, but non-uniform motion. This required the discovery of some efficient intention, acting upon the Solar system. The fact that the planetary orbits are approximately elliptical, and, more remarkably, that the Sun is located at one of the foci of the ellipse, produced the proof of principle which Isaac Newton bowdlerized from his reading of Kepler's published work as the so-called "three laws."¹² That role of the Sun, and the harmonic characteristics of each of the orbits and their relations within the Solar system, led Kepler to defining the universal principle of gravitation. That discovery was the central event in the birth, by midwife Kepler, of competent forms of modern mathematical physics.

Vernadsky used the same modern method in defining ontologically paradoxical distinctions among three classes of universal physical evidence: first, what are the ostensibly entropic abiotic processes; second, the characteristically anti-entropic living processes, and their fossils; and, third, the anti-entropic actions of the noëtic processes existing uniquely in man.¹³ As Pasteur's work on beer and wine underscored, there

Cusa's *De Docta Ignorantia* was the first introduction of the method of modern experimental physical science.

12. It was broadly known that Hooke was the probable source for Newton's plagiarism of Kepler's work. Recently, an associate found a location in which Newton himself writes a reference to his copying from Kepler.

13. Prior to the hoaxes of two utopian devotees of Bertrand Russell, "ivory tower" mathematicians Norbert Wiener ("information theory") and John von Neumann ("systems analysis," "artificial intelligence"), the term "negative entropy" ("negentropy") was commonly used to identify an experimental principle which distinguished living from non-living processes. The clever, but doubtful speculations of former Ludwig Boltzmann student Erwin Schrödinger and the outright hoaxes by Wiener, von Neumann, and their dupes, obliged me to adopt the term anti-entropy, to avoid confusion with the pack of popularized ivory-tower speculations associated with Wiener et al. The relevant concoctions of Wiener and von Neumann were rooted in the earlier, wild assumptions of the wild reading of the work of the Ecole Polytechnique's Sadi Carnot, by the collaborators Clausius, Grassmann, and Kelvin, and the reductionist dogma of "three laws of thermodynamics." These reductionist conceptions of those collaborators were bad enough, until the positivist fanatics associated with Ernst Mach and Boltzmann made matters worse, especially after the hideous frauds perpetrated against Max Planck by the Machians. Wiener and von Neumann are reflections of Bertrand Russell's association with the radical-positivist circles of the Machians. The common epistemological characteristic of all these ivory-tower mathematicians, Boltzmann notably included, is that they are radical reductionists of the type which demand that nothing be allowed to exist outside of a purely mechanistic Euclidean space. Thus, Wiener defined "negative entropy" as a statistical event within the type of abiotic universe in which no human being

are determinations of a lawful character, which occur in living processes, but which are absent in non-living forms. As my work has emphasized, the willful increase of the human species' potential relative population-density, through application of discoveries of universal physical principles, is a phenomenon which does not exist in lower forms of life. Thus, distinctions of this type, once proven by the experimental standards required for defining a universal physical principle, divide the universe among three distinct, but efficiently multiply-connected phase-spaces.

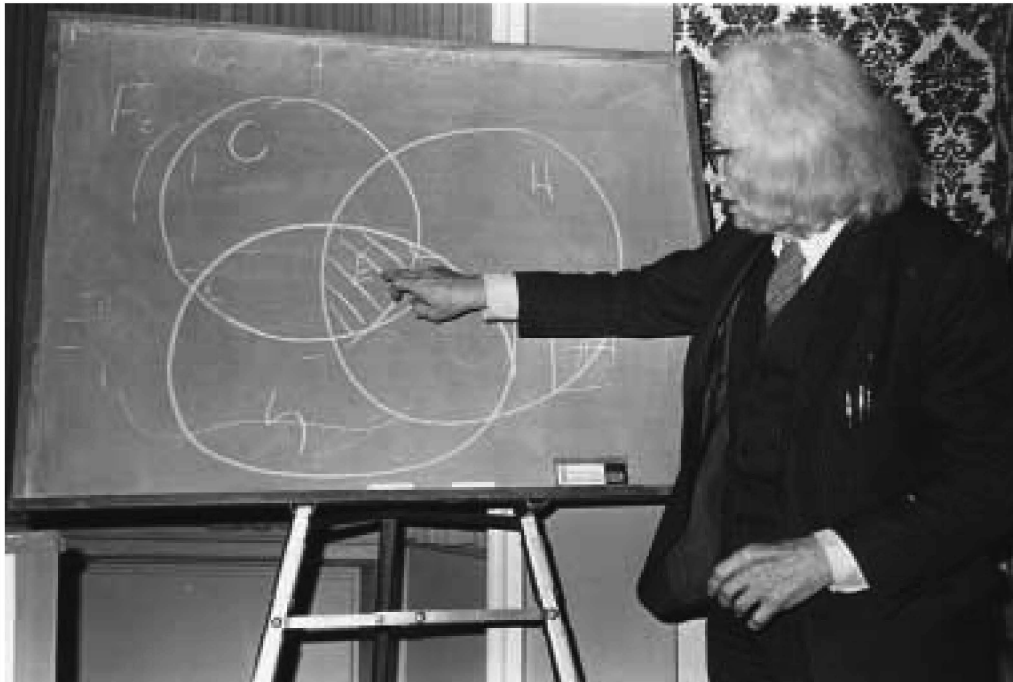
The nature of that multiple-connectedness is itself of crucial significance. The implications have two categorical relevancies.

First, as Vernadsky's work in geobiochemistry showed, the cumulative increase of the Earth-ball's ration of combined living processes and their fossils, including fossils such as the atmosphere and water, shows the intention of life to dominate non-life increasingly. "In the long run," the principle of life is more powerful.

The second implication is more profound, both for the scientist and the theologian. We are confronted with evidence supporting a proposition which I posed to our Fusion Energy Foundation during the early 1980s, a proposition which we presented to Lawrence Livermore Laboratories: Where did the planets, with their orbits, come from? If the Solar system is "Keplerian," rather than "Newtonian," and if the universe is organized as a system of multiply-connected, abiotic, living, and cognitive phase-spaces, consider propositions of the following type. There was considerable debate and discussion of this among the senior physicists and others associated with our Foundation, among whom the most notable figure was Professor Robert Moon. The corollary topic was: Are we willing to discard today's generally accepted classroom mathematics when it conflicts with the physical evidence? Professor Moon was among those who were willing to support and explore that proposition; some other distinguished physicists among us, were not.

Broadly, the implication of Kepler's work for modern astrophysics, is the presumption that the Sun was once a fast-spinning "ball," shedding much of its material in its rotation. However, if we assume the kind of thermonuclear fusion we attribute to that Sun, how do we account for the known periodic table of elements of today's planetary system? Iron? Yes; but, what of the higher region of table? I posed the question: Would the material spun off in the early phase not tend to be "polarized," and hit with such radiation from the Sun that polarized fusion could be induced in the generated envelope? Would this be sufficient to account for the known "natural" periodic table of the Solar system? The expert estimation was that it would be sufficient.

is allowed, mathematically, to exist. Not merely incidentally, active wits might pose philosophical doubts of the real-world existence of Wiener and von Neumann. The appropriate term for real-world use, in which human beings exist, is therefore "anti-entropy."



The late Dr. Robert Moon, of the Fusion Energy Foundation, was one of the few distinguished physicists in dialogue with LaRouche during the early 1980s, who were willing to support and explore LaRouche's proposition that generally accepted classroom mathematics should be discarded, when it comes into conflict with physical reality. Here, Dr. Moon addresses a meeting of the Club of Life in Chicago in 1983, with a proposal for revitalizing the city.

If those propositions could be adopted, then the Solar system would be generated by the Sun through a kind of "fractional distillation." According to Kepler's principle, material falling into Keplerian orbital pathways would condense into planets and associated moons, such that the orbiting body would have the Keplerian orbital characteristics of the plasma distributed along the orbit as a whole.

That hypothesis is only partially proven, but I cite it, nonetheless, only as a convenient way of illustrating a crucial point which will otherwise be a startling contention for most readers.

In a universe composed of multiply-connected phase-spaces, as I recast Vernadsky's Noösphere, the following conditions prevail.

First. The term "universe" can be used only to define existences within the scope of what are experimentally validated as universal physical principles. Nothing exists "before," "outside," or "after" that universe.

Second. By virtue of the nature of mankind as a cognitively creative being, contrary to Isaac Newton and Immanuel Kant, for example, a *universally efficient* God is proven to exist throughout the scope of that universe, as an object of scientific certainty, as a cognitive being.¹⁴

14. Respecting the relevant aspects of the nature of man: Cf. Plato, *Phaedo*, and Moses Mendelssohn, *Phaedon*. Also compare Philo Judaeus of Alexandria on the subject of the soul. Cognitive action, the act of discovery, or cognitive transmission of a universal principle, requires a notion of time which is distinct from action located axiomatically within sense-perception. The individual so acting lives efficiently in a physical-space-time, in which ordering persists, but clock-time is only a shadowy reflection of sequence. The cognitive individual lives forever in his or her "place" in the universal

Third. The principle of action within that universe is of the characteristics reflected by mankind's own progress through discovery and application of universal physical principles.

Fourth. The characteristics of all three phase-spaces are acting jointly in every aspect of the universe as a whole, to such an effect of that anti-entropy typical of life, and also that typical of human cognition.

Fifth. God's manifest purpose, is the redemption of man as made in the image of the living Creator of the universe. This is otherwise stated as the principle of *agapē*, as identified by Plato, and as reflected in the *Gospel of John* and *I Corinthians* 13. This notion of *agapē* is otherwise known as the principle of the *general welfare*, or *common good*, on which the existence of the sovereign form of modern nation-state republic was premised from the Fifteenth-Century Renaissance on, as in the work of Nicholas of Cusa. The purpose of the individual is *to do good*, as Cotton Mather and Benjamin Franklin emphasized in their leading roles in the building of the sovereign U.S. constitutional republic.

Is this economics!!!? It is real economics, as I shall explain the most crucial features of the basis for my unique record of success as a long-range forecaster. My recognition of the indispensable function of Riemann's discoveries is itself an essential advantage over Vernadsky's approach, in dealing with the relationship between the individual discovery of a physical principle and economic progress; but, by itself, it would fail to address the decisive nature of the challenge with

eternity of cognitively ordered physical space-time. So, if we relive the acts of discovery by Plato or Archimedes, their discovery lives within us, and they are acting, still today, upon us, over the span of intervening time.

which economy confronts society. On the latter account, those five epistemological issues of the theology which I have just described, are crucial.

It is the cognitive mode of transmission of formally Classical ideas of physical science and artistic composition, as typified by Plato's Socratic dialogues, which defines the "mechanisms" by which the transmission of knowledge of true principles is effected. It is the way in which social processes, including general education, operate, to foster or impede such cognitive forms of transmission, which predetermine the likely outcome of the behavior of the present adult generation for society two generations later.

2. Conclusion: Us As Tragedy

So, the catastrophic failures of the U.S.A. since 1964, have produced the sheer awfulness of the global economic-strategic situation today. If the adult generation of child-rearers today fails to meet its obligation to do as Cotton Mather and Benjamin Franklin prescribed, the obligation to do good, it is their grandchildren and great-grandchildren who, as now, are likely to reap the resulting catastrophe, even, as now, an imminent global catastrophe brought about chiefly through the corruption of the generation entering universities during the middle to late 1960s, and their corruption of the generation which they, in turn, reared.

Like the orbit of a planet of the Solar system's outer rings, the completion of a cycle of history is not a matter of mere years, but sometimes generations. Just as knowledge of the laws of the Solar system demands attention to the completed orbit, rather than assumptions based on mere recent experience, so "my experience" of a generation is almost worthless as evidence of a principle, except as we are able to show the consequences of that generation's activity several generations later, at least implicitly so.

For precisely that reason, no economic teaching is competent, except as it is based on long-range forecasting of the type which I have practiced. To have a competent grasp of anything important respecting an economy, it is essential to treat the economic process as a multi-generational social-physical system, as I have done.

For example, even the simplest form of financing of modern large-scale investments in basic economic infrastructure, requires that the capital outlays required be offset by income and repairs conducted over approximately a quarter-century: a contemporary generation; and that the further impact of that improvement be assessed over a cycle of not less than two generations: a contemporary, brief interval of a half-century. We must measure such effects for not only the investments we make, but also for the injury to future society by the investments we failed to make. (Do not be like the fool who died of a grenade explosion because he insisted, "I am not leaving this foxhole until I know that the war is over.")

All such and related matters considered, the power of society to survive and prosper, depends upon the quality and extent of the development of the cognitive qualities of the individual members of society. To what degree can they think scientifically, for example? Even more important than physical science, is the development of the moral potential of the individual through acquired self-discipline in those principles of Classical artistic composition which coincide with Plato's Socratic method. It is the combined cognitive development of the young individual in the cognitive side of both physical science so-called, and also Classical artistic principles in poetry, drama, plastic art, and music, which nurtures the moral potential of the future adult.

This moral potential is expressed by the student's coming to embody within his, or her cognitive being, a cognitive reexperiencing of the discoveries of principle effected by individual minds of the past, including such distant past sources as figures of Classical Greek culture. The study of human history from the standpoint of that reexperiencing of the history of contributions of cognitive ideas, is the only way in which to induce efficiently a true moral sense to the maturing young individual, the method sometimes described as a Classical humanist education.

All failures of all known societies before our time, have been the fruit of an inadequate emphasis on, or even lack of, such a Classical humanist approach to fostering the cognitive powers of the individual mind.

The combination of valid and absurd ideas, which are implicitly embodied as principles for practice within a population and its institutions, forms a system, in which these ideas serve as an aggregation of interacting definitions, axioms, and postulates of that system. The discrepancy between that aggregation and the principles of a durably successful form of society, are the essence of the tragic factor in all known cultures to date, including the U.S.A. today.

The idiot racing toward self-destruction today, is the person who denies the existence of truth, lest it interfere with his commitment to that irrationally composed mere opinion which is guiding our nation toward self-destruction.

It is thus by our nation's popular opinion, and it now hovers on the brink of a waiting self-destruction. It is the fool who refuses to think, since he has already made up his mind, who lurches like a legendary lemming, over the cliff's edge of generally accepted popular opinion, to the waiting tragedy on the rocks below.